

BFLP0169 Polypeptides

5 A BFLP0169 polypeptide of the invention includes the BFLP0169-like protein whose sequence is provided in SEQ ID NO:2. The invention also includes a mutant or variant form of the disclosed BFLP0169 polypeptide, or of any of the fragments of the herein disclosed BFLP0169 polypeptide sequences.

Thus, a BFLP0169 polypeptide includes one in which any residues may be changed from the corresponding residue shown in SEQ ID NO:2 while still encoding a protein that maintains 10 its BFLP0169-like activities and physiological functions, or a functional fragment thereof. In some embodiments, up to 20% or more of the residues may be so changed in the mutant or variant protein. In some embodiments, the BFLP0169 polypeptide according to the invention is a mature polypeptide.

Rapamycin Binding Domains

15 To identify regions of a BFLP0169 polypeptide sequence (e.g., a polypeptide including all or a portion of SEQ ID NO:2) containing rapamycin binding domains, the entire coding sequence, or a fragment of a BFLP0169 polypeptide sequence, is tested for its ability to bind rapamycin. Any technique known in the art for determining binding of a polypeptide to a small molecule can be used. For example, rapamycin can be labeled (*i.e.*, with a non-radioactive label 20 or with a radiolabel (e.g., ^{14}C , ^{32}P , ^3H , or ^{125}I), and mixed with a polypeptide containing some or all of a BFLP0169 polypeptide sequence. The polypeptide optionally includes a moiety that facilitates detection, e.g., the polypeptide can be a fusion polypeptide that includes a BFLP0169 sequence and a non-BFLP0169 polypeptide sequence.

A reagent specific for the polypeptide containing the BFLP0169 polypeptide sequence 25 (e.g., an antibody specific for BFLP0169 or a probe specific for the non-BFLP0169 polypeptide in the case of a fusion polypeptide) is added to the mixture. Complexes that bind to the reagent are isolated, and the presence of label, which reveals the presence of rapamycin, is determined.

In general, a BFLP0169-like variant that preserves BFLP0169-like function includes any variant in which residues at a particular position in the sequence have been substituted by other